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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/885,744	06/20/2001	Hiroaki Niimi	TI-32705	5587
23494	7590	11/20/2003	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED				
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			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 11/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action

Application No.

09/885,744

Applicant(s)

NIIMI ET AL.

Examiner

Khiem D Nguyen

Art Unit

2823

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 20 October 2003 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY (check either a) or b)]

- a) ☒ The period for reply expires 4 months from the mailing date of the final rejection.
 b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
 ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
 2. ☐ The proposed amendment(s) will not be entered because:
 (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
 (b) ☐ they raise the issue of new matter (see Note below);
 (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
 (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____

3. ☐ Applicant's reply has overcome the following rejection(s): _____.
 4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
 5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: See Continuation Sheet.
 6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
 7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: none.

Claim(s) objected to: none.

Claim(s) rejected: 1-7 and 9-13.

Claim(s) withdrawn from consideration: _____.

8. ☐ The proposed drawing correction filed on _____ is a) ☐ approved or b) ☐ disapproved by the Examiner.
 9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
 10. ☐ Other: _____

W. DAVID COLEMAN
PRIMARY EXAMINER

Continuation of 5. does NOT place the application in condition for allowance because: In response to Applicant's argument that Huang et al. 1) does not start with an oxide layer, 2) does not "subsequently" subject an oxide layer to nitridization, and 3) does not "subsequently" re-oxidize or anneal any such nitrided layer, examiner respectfully disagree, Applicants is directed to (page 2, paragraphs [0019] and FIGS 3-4) wherein Huang et al. (U.S. Pub. 2002/0146914) disclose providing a substrate 101 having a semiconductor surface; forming an oxygen-containing layer 104 on the semiconductor surface; and subsequently re-oxidizing the layer by a rapid anneal step in a mixture of N₂O and H₂ wherein the anneal steps comprises 20 s or more at 1050 °C in N₂O/H₂, (page 2, paragraphs [0021] and [0022]). Daniel et al. (U.S. Patent 6,235,590) is being used as a secondary reference to disclose forming a uniform nitrogen distribution throughout the oxygen-containing layer (col. 2, lines 39-42). Therefore, Huang in view of Daniel disclose the limitations as recited in the present independent claim 1, and thus the step of re-oxidizing the oxygen-containing layer as disclosed by Huang in view of Daniel would stabilizing the nitrogen distribution, healing plasma-induced damage, and reducing interfacial defect density because the same materials are treated in the same manner as in the instant invention. For these reasons, the final rejection is considered proper.